

REMARKS

By this Amendment, new claim 15 is added, leaving claims 1, 2, 4, 5, and 9-15 pending. It is respectfully requested that the claim amendments be entered for reasons stated below. Reconsideration of the July 7, 2003 Office Action is respectfully requested in light of the following remarks.

1. Allowable Subject Matter

Applicants gratefully acknowledge that claims 1, 2, 5, 9, 10 and 12-14 have been allowed. However, for the reasons stated below, it is respectfully submitted that claims 4, 11 and 15 also are allowable.

2. Rejection Under 35 U.S.C. §103

Claims 4 and 11 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,242,549 to Potter et al. ("Potter") in view of U.S. Patent No. 4,472,521 to Band. The rejection is respectfully traversed.

Claim 4 recites "a process for preparing a titanium halide, comprising bringing a waste solution containing a titanium alkoxide into contact with a halogenating agent to convert the titanium alkoxide to a titanium halide." It is asserted in the Office Action that the concept of converting a metal oxide to a metal base in the presence of a halogenating agent is known as taught by Band. It is further asserted that "Potter teaches the distillation of the specific titanium alkoxide and titanium halide as claimed. Thus, an artisan wanting *to particularly transform the specific titanium alkoxide to a titanium halide* would employ the known halogenating agent, taught by Band to Potter's process" (Emphasis added.) Applicants respectfully disagree with these assertions.

Potter discloses a process for the separation of titanium tetrachloride and halohydrocarbon from a mixture by distillation. The process separates titanium tetrachloride from other components including titanium alkoxides in a first distillation zone. The separated titanium tetrachloride is recycled to the first distillation zone for use in further separations (column 3, lines 34-38). The bottoms product containing titanium alkoxides from the first distillation zone is passed to a second distillation zone. In the second separation zone, the separation solvent is recovered from the top of the zone and the bottoms product is removed and ultimately is passed to waste disposal or further processing (*see* the paragraph bridging columns 3-4 of Potter).

Potter discloses that the disproportionation of titanium trichlorobutoxide to produce titanium dichlorodibutoxide and titanium tetrachloride occurs in a known process. Potter does not suggest that the known process of converting titanium trichlorobutoxide to titanium halide (titanium tetrachloride) by disproportionation uses a halogenating agent. Potter further discloses that due to "some analogous process" to that of the known process, in Potter's process more titanium tetrachloride is typically obtained by operation of the process than is present in the waste product fed to the process (column 5, lines 46-50). As Potter's process produces an excess of a titanium halide *without* using a halogenating agent for the conversion, there is no motivation to modify Potter's process to *also* use a halogenating agent to convert titanium alkoxide to titanium halide.

Also, in Potter's process, prior to the distillation, a specific separation solvent of intermediate atmospheric boiling point is added to the product mixture containing titanium tetrachloride, titanium alkoxides and other components to facilitate separation of the highly

volatile components (titanium tetrachloride and halohydrocarbon) from the poorly volatile components (remaining mixture components.) In contrast, the claimed process for preparing titanium halide comprises adding a halogenating agent to the waste solution to convert titanium alkoxide to titanium halide prior to distillation. Potter's separation solvent is different from the claimed halogenating agent.

Band fails to cure the deficiencies of Potter. Band discloses a process for preparing a catalyst using a first compound, which is an alkoxide of a Group IIA or VIIB metal. Band fails to suggest the conversion of a titanium alkoxide to a titanium halide. In contrast, but rather discloses the conversion of metal alkoxide to metal halide by using a halogenating agent to preferably produce magnesium halide or manganese halide (column 4, lines 11-13). Band does not suggest any process that produces a titanium halide, and thus does not suggest somehow modifying Potter's process to convert titanium alkoxide to titanium halide.

Also, Band discloses that one of the two preferred halogenating agents for Band's particular process is titanium tetrachloride (TiCl_4) (column 4, line 22). Band provides no motivation to modify Potter's process to use titanium tetrachloride as a halogenating agent for converting titanium alkoxide to titanium halide (e.g., titanium tetrachloride) because the product of Potter's process is titanium tetrachloride, i.e., Potter's product is the same as Band's halogenating agent. As explained above, Potter's process produces an excess of titanium tetrachloride, but without using a halogenating agent.

Thus, the combination of Potter and Band would not have rendered obvious the process recited in claim 4. Therefore, withdrawal of the rejection of claims 4 and 11 is respectfully requested.

3. New Claim

Support for the subject matter recited in claim 15 is provided at pages 17 and 18 of the specification. New claim 15 depends from independent claim 4, which is patentable for reasons stated above. Claim 15 thus is also patentable for at least the same reasons that claim 4 is patentable. Therefore, it is respectfully submitted that entry of claim 15 does not raise any new issue that would require further search by the Examiner.

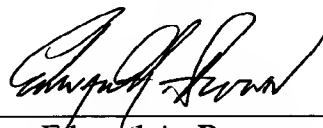
For the foregoing reasons, withdrawal of the rejection and prompt allowance of the application are respectfully requested.

Respectfully submitted,

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